

Mineral Industry Surveys

For information, contact:

Peter H. Kuck, Nickel Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4965, Fax: (703) 648-7757
E-mail: pkuck@usgs.gov

Barbara J. McNair (Data)
Telephone: (703) 648-7952
Fax: (703) 648-7975
E-mail: bmcnair@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

NICKEL IN DECEMBER 2005

Reported domestic nickel consumption in December, on a daily average basis, was 10% less than the revised total for November, according to the U.S. Geological Survey. Daily average nickel consumption of cathodes, pellets, briquets, powders, and ferronickel for stainless steel production was 58.2 metric tons per day (t/d), 2% greater than 57.1 t/d (revised) for November, but 14% less than 67.5 t/d (revised) for December 2004. Consumption of >99.8% nickel metal to make superalloys (such as INCONEL 718 and WASPALOY) decreased 17% from November levels, on a daily average basis. Consumption of nickel to make corrosion-resistant, less stress-resistant nickel-base alloys (such as INCONEL 600 and Nickel 200) decreased by 9% from November levels, on a daily average basis. Sales to plating companies averaged 27.1 t/d, about 3% less than November sales of 27.9 t/d (revised).

On December 31, U.S. consumer stocks of cathode, pellets, briquets, and powders totaled 2,040 metric tons (t), up 19% from 1,710 t (revised) for November 30 and up 41% from 1,450 t reported for December 31, 2004. Stocks in London Metal Exchange (LME) warehouses totaled 36,042 t on December 31, 50% greater than 23,964 t on November 30.

The United States imported 134,000 t of primary nickel in the first 11 months of 2005, 9% greater than 123,000 t for the corresponding period in 2004. Trade data for December will appear in a subsequent report.

Some of the percentages reported in the first paragraph are based on data concealed to avoid revealing individual company proprietary data.

TABLE 1
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE¹

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total	Total year to date
2004:					
December	4,570	482	36	5,090	65,500 ^r
January-December	57,500 ^r	7,590 ^r	426 ^r	65,500 ^r	XX
2005:					
January ^r	5,110	543	44	5,700	5,700
February ^r	5,040	464	44	5,540	11,200
March ^r	5,090	567	44	5,700	16,900
April ^r	5,410	430	50	5,890	22,800
May ^r	5,000	520	41	5,560	28,400
June ^r	5,420	541	44	6,000	34,400
July ^r	4,590	378	38	5,000	39,400
August ^r	5,060	437	41	5,540	44,900
September ^r	5,190	658	44	5,900	50,800
October ^r	5,220	708	43	5,970	56,800
November ^r	5,210	585	56	5,850	62,600
December:					
Steel:					
Stainless and heat resisting	1,190	619	W	1,800	19,700
Alloy (excludes stainless)	221	--	--	221	2,980
Superalloys	1,140	--	W	1,140	14,300
Copper-nickel alloys	W	--	--	W	W
Electric, magnetic, and expansion alloys	13	--	--	13	158
Other nickel & nickel alloys	W	--	W	W	W
Cast iron	W	--	--	W	W
Electroplating (sales to platers)	831	--	--	831	10,300
Chemical and chemical uses	W	--	--	W	W
Other uses	1,370	--	50	1,420	20,600
Total reported	4,750 ²	619	50	5,420	68,100
Total all companies (calc) ³	XX	XX	XX	10,200	128,000
2005: January-December	61,100	6,450	542	68,100	XX
2004: January-December	58,500	7,590	426	65,500	XX

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Of consumption, 3,820 metric tons were consumed as cathodes and pellets, the remainder as briquets and powder.

³Figures represent calculated apparent consumption; based on the revised proportion of reported primary consumption (53.17%) to apparent primary consumption for 2003.

TABLE 2
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS,
BY FORM AND USE^{1,2}

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total
2004:				
December	1,450	147	45	1,640
2005:				
January ^r	1,740	265	137	2,140
February ^r	1,850	268	160	2,280
March ^r	2,250	279	140	2,670
April ^r	1,880	285	141	2,310
May ^r	1,980	274	144	2,400
June ^r	1,850	310	132	2,290
July ^r	1,590	283	141	2,020
August ^r	1,670	276	139	2,090
September ^r	1,670	273	153	2,100
October ^r	1,660	279	147	2,080
November ^r	1,710	307	147	2,170
December:				
Steel (stainless, heat resisting and alloy)	798	287	(3)	1,090
Nonferrous alloys ⁴	1,120	W	(3)	1,120
Foundry (cast irons)	(3)	W	--	(3)
Chemical (catalysts, ceramics, plating salt, etc.) and unspecified uses	126	W	159	285
Total	2,040	287	159	2,490

^rRevised. W Withheld to avoid disclosing company proprietary data. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks held by companies that consume nickel in more than one end use category are credited to the major category.

Stocks are subject to revisions owing to inventory adjustments.

³Included in the "Chemical and unspecified uses" category.

⁴Includes superalloys, nickel-copper and copper-nickel alloys, permanent magnet alloys, and other nickel alloys.

TABLE 3
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE¹

(Metric tons, nickel content)

Period	Consumption			Stocks		
	Ferrous scrap ²	Nonferrous scrap ³	Total scrap	Ferrous scrap ²	Nonferrous scrap ³	Total scrap
2004:						
December	6,250	585	7,010	3,320	65	3,390
January-December	75,100	9,700 ^r	84,800 ^r	XX	XX	XX
2005:						
January	5,720	648	6,370	2,330	72	2,400
February	4,680	736	5,420	2,440	82	2,530
March	4,510	799	5,310	2,490	96	2,590
April	4,930	762	5,700	2,510	95	2,610
May	3,790	776	4,560	2,620	93	2,710
June	4,520	698	5,220	2,810	115	2,930
July	4,120	658	4,780	2,740	102	2,840
August	4,360	748	5,110	2,630	113	2,740
September	4,490	709	5,200	2,800	99	2,900
October	5,000	638	5,640	3,010	110	3,120
November	5,520	611	6,130	2,630	98	2,730
December	4,530	593	5,130	2,470	89	2,560
January-December	56,200	8,380	64,600	XX	XX	XX

^rRevised. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

³Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of origin	Cathodes pellets, and briquets	Powder and flakes	Ferro- nickel	Metal- lurgical- grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date ⁴	Wrought nickel
2004:										
November	9,140	659	1,240	240	602	696	378	13,000	141,000	33
December	9,380	814	1,730	170	403	1,340	295	14,100	155,000	46
January-December	107,000	9,220	13,900	1,210	7,850	11,000	4,440	155,000	XX	796
2005:										
January	9,040	756	1,940	114	585	780	279	13,500	13,500	40
February	10,200	596	2,040	122	524	853	360	14,700	28,200	95
March	7,600	1,010	1,950	488	629	750	334	12,800	40,900	81
April	11,100	813	1,820	325	515	1,070	316	16,000	56,900	65
May	9,140	866	1,260	257	595	831	407	13,400	70,300	75
June	9,010	335	2,470	--	583	776	308	13,500	83,800	119
July	9,050	543	1,700	--	633	624	177	12,700	96,500	89
August	10,500	772	1,370	--	447	402	295	13,800	110,000	116
September	9,410	500	1,890	--	645	443	294	13,200	123,000	94
October	8,410	794	728	17	719	505	286	11,500	135,000	63
November:										
Australia	1,430	20	--	--	--	--	--	1,450	11,800	--
Brazil	314	--	--	--	--	--	--	314	1,400	--
Canada	3,870	391	--	107	271	393	19	5,050	60,400	--
Colombia	--	--	243	--	--	--	--	243	3,480	--
Dominican Republic	--	--	898	--	--	2	--	900	13,300	--
Finland	243	54	--	--	--	--	54	351	3,810	--
France	78	--	--	--	81	--	20	179	2,090	31
Germany	--	8	--	--	29	--	24	61	848	37
Japan	--	1	--	--	28	--	56	85	579	1
Mexico	--	--	--	--	26	166	2	194	2,380	--
New Caledonia	--	--	95	--	--	--	--	95	1,390	--
Norway	1,640	--	--	--	8	--	--	1,650	18,100	--
Russia	1,970	120	--	--	--	--	--	2,090	20,400	--
South Africa	--	60	--	--	--	--	--	60	669	--
Sweden	--	2	--	--	--	--	--	2	17	--
United Kingdom	10	38	--	--	177	--	8	233	2,520	16
Venezuela	--	--	--	--	--	--	--	--	250	--
Zimbabwe	94	--	--	--	--	--	--	94	1,450	--
Other	40 ⁵	20	--	--	69	20	94	243	3,290	9
Total	9,690	714	1,240	107	689	581	277	13,300	148,000	94
2005: January-November	103,000	7,700	18,400	1,430	6,560	7,610	3,340	148,000	XX	930
2004: January-November	97,700	8,410	12,200	1,040	7,450	9,640	4,140	141,000	XX	749

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴May include revisions for prior months.

⁵All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of destination	Cathodes pellets, and briquets	Powder and flakes	Ferro- nickel	Metal- lurgical- grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date	Wrought nickel
2004:										
November	77	257	1	45	890	2,530	285	4,080	51,700	42
December	27	196	23	98	1,030	2,980	227	4,580	56,300	95
January-December	972	2,130	68	201	12,400	35,900	4,630	56,300	XX	1,110
2005:										
January	37	211	1	161	1,230	2,400	228	4,270	4,270	63
February	31	165	3	3	877	3,960	316	5,360	9,620	57
March	91	160	12	7	1,070	3,990	289	5,630	15,200	131
April	82	190	6	4	902	5,710	344	7,230	22,500	104
May	84	373	11	2	777	3,230	452	4,930	27,400	129
June	168	176	9	2	523	2,950	460	4,280	31,700	214
July	173	113	4	3	814	3,020	335	4,460	36,200	105
August	91	84	--	1	1,270	3,350	506	5,300	41,500	156
September	147	85	4	5	1,150	3,950	315	5,650	47,100	105
October	134	148	1	8	1,040	3,450	281	5,070	52,200	94
November:										
Australia	--	3	--	(4)	27	1	(4)	31	504	--
Belgium	--	1	--	--	19	--	(4)	20	240	--
Canada	26	12	--	2	802	139	101	1,080	11,600	12
China	--	(4)	--	--	9	2,200	8	2,220	17,300	2
Finland	--	--	--	--	8	--	--	8	5,210	--
Germany	--	19	--	--	5	2	(4)	26	741	1
India	--	1	--	--	--	168	--	169	2,610	--
Italy	--	(4)	--	--	--	--	--	(4)	65	1
Japan	2	9	(4)	2	--	13	43	69	1,070	11
Korea, Republic of	--	4	--	1	--	211	5	221	3,730	7
Mexico	41	5	--	--	--	--	41	87	3,510	1
Netherlands	--	(4)	--	--	--	42	--	42	584	1
South Africa	--	--	--	--	--	--	1	1	91	--
Spain	--	8	--	--	--	422	--	430	795	--
Sweden	--	--	--	--	32	--	--	32	377	--
Taiwan	--	4	--	--	--	377	23	404	5,010	(4)
United Kingdom	--	11	--	--	92	10	20	133	1,120	4
Other	1	39	--	--	10	58	29	137	2,770	39
Total	70	116	(4)	5	1,000	3,640	271	5,100	57,300	79
2005: January-November	1,110	1,820	50	199	10,700	39,600	3,800	57,300	XX	1,240
2004: January-November	946	1,940	45	103	11,400	32,900	4,400	51,700	XX	1,020

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of origin	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
November	245	247	624	280	41	246	233	1,920	18,200
December	269	300	588	226	43	106	145	1,680	19,900
January-December	3,000	3,120	5,740	2,590	322	3,060	2,080	19,900	XX
2005:									
January	273	220	600	234	35	67	304	1,730	1,730
February	329	255	422	257	49	175	202	1,690	3,420
March:	361	294	629	316	16	103	173	1,890	5,320
April	241	338	486	274	33	143	176	1,690	7,010
May	310	355	662	324	43	148	152	1,990	9,000
June	437	422	558	260	20	159	237	2,090	11,100
July	325	342	603	275	29	64	194	1,830	12,900
August	447	360	462	242	20	172	293	2,000	14,900
September	644	314	500	241	34	176	156	2,070	17,000
October	491	333	480	241	20	170	466	2,200	19,200
November:									
Australia	260	--	--	--	--	--	(2)	260	1,570
Belgium	8	--	(2)	--	--	--	(2)	8	100
Canada	--	--	3	14	--	9	51	77	539
China	--	--	4	--	--	(2)	87	91	909
France	(2)	(2)	240	42	--	43	2	327	2,100
Germany	131	72	148	196	14	61	2	624	8,910
Italy	6	70	1	(2)	--	2	4	83	1,330
Japan	--	--	2	2	--	125	(2)	129	317
Mexico	--	--	--	--	--	--	8	8	145
Netherlands	--	--	(2)	--	--	--	4	4	173
South Africa	38	--	--	--	--	--	--	38	433
Sweden	--	--	214	7	--	42	--	263	2,180
United Kingdom	51	38	5	--	2	2	11	109	1,280
Other	57	34	12	1	--	2	29	135	1,350
Total	551	214	629	262	16	286	198	2,160	21,300
2005: January-November	4,410	3,450	6,030	2,930	315	1,660	2,550	21,300	XX
2004: January-November	2,730	2,830	5,150	2,370	279	2,950	1,930	18,200	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of destination	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
November	613	1,110	183	327	21	148	256	2,660	26,900
December	823	1,100	157	350	5	150	244	2,830	29,700
January-December	7,510	10,400	1,850	4,470	244	1,800	3,440	29,700	XX
2005:									
January	994	1,180	84	312	11	226	186	2,990	2,990
February	910	1,050	104	392	10	163	278	2,910	5,900
March	1,200	1,350	178	388	7	200	404	3,730	9,630
April	499	1,350	135	340	8	190	281	2,800	12,400
May	1,200	1,170	158	378	3	191	268	3,370	15,800
June	726	1,220	108	275	5	216	272	2,820	18,600
July	1,130	1,060	170	409	5	211	293	3,280	21,900
August	1,010	1,310	114	301	9	285	360	3,390	25,300
September	565	1,250	92	398	26	237	286	2,850	28,100
October	731	1,100	125	393	27	417	401	3,190	31,300
November:									
Australia	--	2	1	(2)	--	(2)	1	4	63
Belgium	86	254	7	15	(2)	(2)	1	363	3,850
Canada	8	53	18	50	2	46	27	204	2,060
China	11	117	3	22	(2)	144	38	335	2,340
France	135	346	(2)	2	(2)	2	2	487	4,610
Germany	3	93	10	9	(2)	4	1	120	1,420
India	--	1	1	1	--	5	(2)	8	367
Ireland	(2)	--	--	(2)	--	--	(2)	(2)	61
Israel	4	102	1	1	--	--	(2)	108	1,050
Italy	54	37	2	8	(2)	1	(2)	102	1,070
Japan	286	75	1	10	(2)	8	3	383	6,200
Korea, Republic of	(2)	6	1	52	(2)	2	1	62	757
Mexico	(2)	63	43	35	1	139	160	441	3,620
Netherlands	1	6	--	2	--	1	3	13	201
Singapore	1	1	1	2	--	3	(2)	8	244
Spain	19	(2)	1	--	--	--	(2)	20	133
Sweden	--	(2)	--	2	--	--	5	7	223
Switzerland	1	(2)	(2)	2	(2)	(2)	(2)	3	240
Taiwan	--	2	(2)	13	(2)	28	1	44	377
United Kingdom	3	238	5	20	(2)	3	5	274	3,060
Other	16	30	9	89	2	33	40	219	2,600
Total	628	1,430	104	335	5	419	288	3,210	34,500
2005: January-November	9,600	13,500	1,370	3,920	118	2,760	3,320	34,500	XX
2004: January-November	6,680	9,330	1,690	4,120	238	1,650	3,190	26,900	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

	Percent	
	Wrought	Cast
December 2005:		
Stainless and heat resisting steels	100	(1)
Alloy steels	100	(1)
Superalloys	90	10
Copper-nickel alloys	85	15
Other nickel-base alloys	100	(1)

¹Less than ½ unit.

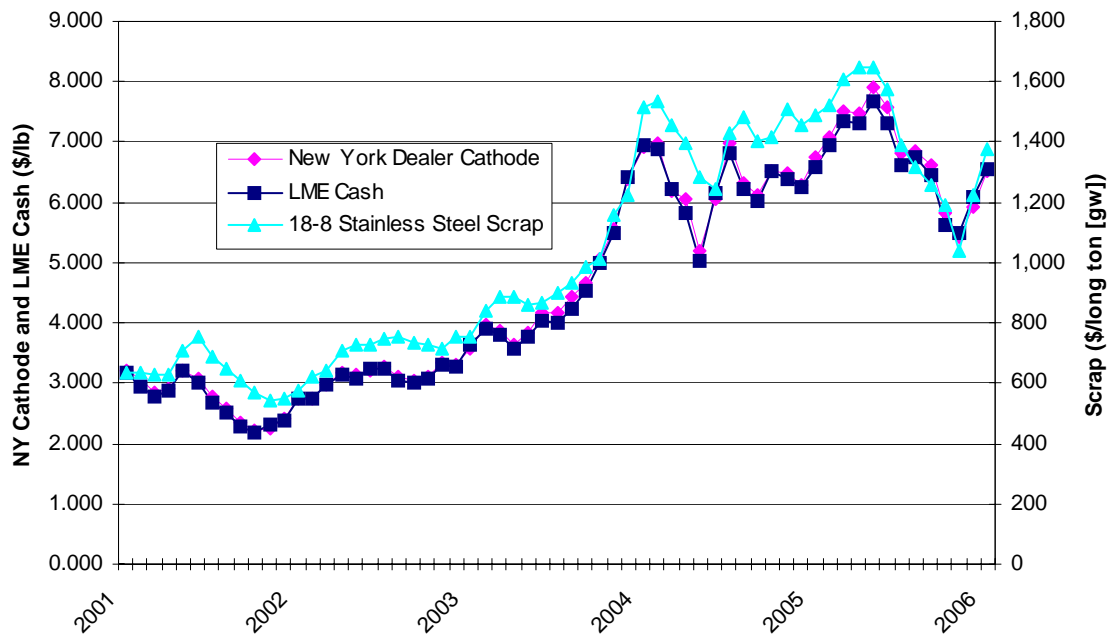
TABLE 9
NICKEL PRICES

Date	Platts Metals Week				American Metal Market
	Cathode NY Dealer \$/lb.	LME Cash mean ¹ \$/t	LME Cash mean ¹ \$/lb.	18/8 Stainless steel scrap Free market \$/long ton (gw)	18/8 Stainless steel scrap Pittsburgh \$/long ton (gw)
2004:					
Average for month of:					
December	6.286	13,768.810	6.245	1,457	1,523
Yearly average	6.341	13,823.241	6.270	1,427	1,473
2005:					
Average for week ending:					
December 2	5.72-5.89	12,766.000	5.791	1,075-1,175	1,200-1,225
December 9	5.74-6.18	13,517.500	6.131	1,175-1,225	1,175-1,200
December 16	6.10-6.40	13,790.500	6.255	1,250-1,300	1,175-1,200
December 23	6.12-6.26	13,308.500	6.037	1,225-1,300	1,175-1,200
December 30	5.93-6.12 ^r	13,367.500	6.063	1,225-1,300	1,175-1,200
Average for month of:					
January	6.748	14,501.250	6.578	1,487	1,513
February	7.065	15,344.625	6.960	1,520	1,513
March	7.510	16,184.524	7.341	1,609	1,563
April	7.480	16,136.429	7.319	1,647	1,685
May	7.920	16,919.750	7.675	1,645	1,629
June	7.564	16,154.432	7.328	1,578	1,610
July	6.820	14,570.833	6.609	1,390	1,538
August	6.863	14,886.932	6.753	1,315	1,388
September	6.610	14,223.088	6.451	1,260	1,388
October	5.840	12,396.548	5.623	1,194	1,350
November	5.429	12,111.477	5.494	1,038	1,244
December	5.923	13,425.625	6.090	1,225	1,193
Yearly average	6.814	14,737.960	6.685	1,409	1,469
2006:					
Average for week ending:					
January 6	6.001-6.371	13,903.125	6.306	1,300-1,355	1,175-1,200
January 13	6.460-6.718	14,655.500	6.648	1,350-1,375	1,275-1,300
January 20	6.588-6.611	14,535.000	6.593	1,350-1,375	1,300-1,325
January 27	6.581-6.804	14,758.000	6.694	1,450-1,475	1,300-1,325
February 3	6.922-7.171	15,098.000	6.848	1,450-1,500	1,300-1,325
February 10	6.977-7.158	15,080.500	6.840	1,450-1,500	1,400-1,425
February 17	6.918-7.177	14,985.000	6.797	1,475-1,550	1,400-1,425
February 24	6.957-7.053	14,835.000	6.729	1,500-1,550	1,400-1,425
Average for month of:					
January	6.408	14,549.643	6.600	1,379	1,275
February	6.944	14,975.000	6.793	1,497	1,387

^rRevised.

¹Mean of the cash buyer price and the cash seller and settlement price.

2001-2006 AVERAGE MONTHLY PRICES (Derived from Metals Week and American Metal Market quotations)



2000-2005 STOCKS

